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10/727,069	12/02/2003	Stuart Antony Green	9052-168	4890

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EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/727,069	GREEN ET AL.	
	Examiner	Art Unit	
	HUNG Q. DANG	2621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *02 December 2003*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-35* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-35* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *02 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *04/16/2004, 07/18/2005*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 17 and 32 are objected to because of the following informalities: Claims 17 and 32 recite "ar_i +b mod c", which should be (ar_i +b) mod c as described in the specification. Appropriate correction is required.

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

> Descriptive material can be characterized as either "functional descriptive material" or "nonfunctional descriptive material." In this context, "functional descriptive material" consists of data structures and computer programs which impart functionality when employed as a computer component. (The definition of "data structure" is "a physical or logical relationship among data elements, designed to support specific data manipulation functions." The New IEEE Standard Dictionary of Electrical and Electronics Terms 308 (5th ed. 1993).) "Nonfunctional descriptive material" includes but is not limited to music, literary works and a compilation or mere arrangement of data.
>
> When functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized. Compare In re Lowry, 32 F.3d 1579, 1583-84, 32 USPQ2d 1031, 1035 (Fed. Cir. 1994) (claim to data structure stored on a computer readable medium that increases computer efficiency held statutory) and Warmerdam, 33 F.3d at 1360-61, 31 USPQ2d at 1759 (claim to computer having a specific data structure stored in memory held statutory product-by-process claim) with Warmerdam, 33 F.3d at 1361, 31 USPQ2d at 1760 (claim to a data structure per se held nonstatutory).
>
> In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer program's functionality to be realized, and is thus statutory. See Lowry, 32 F.3d at 1583-84, 32 USPQ2d at 1035.

Claims 18-33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 18-33 recite "a storage medium". However, the claims do not define a computer-readable medium or memory and is thus non-statutory for that reason (i.e., "when functional descriptive material is recorded on some computer-readable medium it becomes structurally and functionally interrelated to the medium and will be statutory in most cases since use of technology permits the function of the descriptive material to be realized" – Guidelines Annex IV). That is, the scope of the presently claimed control information can range form paper on which the program is written, to a program simply contemplated and memorized by a person. The examiner suggests amending the claim to embody the program on "computer-readable medium" or equivalent in order to make the claim statutory. Any amendment to the claim would be commensurate with its corresponding disclosure.

Also, the USPTO "Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility" (Official Gazette notice of 22 November 2005), Annex IV, reads as follows:

Nonfunctional descriptive material that does not constitute a statutory process, machine, manufacture or composition of matter and should be rejected under 35 U.S.C. Sec. 101. Certain types of descriptive material , such as music, literature, art, photographs, and mere arrangements or compilations of facts or data, without any functional interrelationship is not a process, machine, manufacture or composition of matter. USPTO personnel should be prudent in applying the foregoing guidance. Nonfunctional descriptive material may be claimed in combination with other functional descriptive multi-media material on a computer-readable medium to provide the necessary functional and structural interrelationship to satisfy the requirements of 35 U.S.C. Sec. 101. The presence of the claimed nonfunctional descriptive material is not necessarily determinative of nonstatutory subject matter. For example, a computer that recognizes a particular grouping of musical notes read from memory and upon recognizing that particular sequence, causes another defined series of notes to be played, defines a

functional interrelationship among that data and the computing processes performed when utilizing that data, and as such is statutory because it implements a statutory process.

Claims 18-33 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter as follows. Claims 18-33 recite only data which do not impart functionality to a computer or computing device, and is thus considered nonfunctional descriptive material. Such nonfunctional descriptive material, in the absence of a functional interrelationship with a computer, does not constitute a statutory process, machine, manufacture or composition of matter and is thus non-statutory per se.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-2, 4-7, 18-19, 21-23, and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Lamkin et al. (US 2004/0220791).

Regarding claim 1, Lamkin et al. disclose a data processing system, comprising: a reader that is configured to read data representing a video sequence and a number of associated data each having a corresponding command ([0106]; [0253]); a presentation engine for outputting the video sequence derived from the data representing the video sequence ([0101]; [0106]; [0107]; Fig. 6); a navigation engine, responsive to an event,

to invoke one of the corresponding commands according to the output of the video sequence ([0253]; [0254]); and means to derive a first value from the invoked command of the corresponding commands ([0254]; [0402]; [0403]).

Regarding claim 2, Lamkin et al. also disclose the data representing the video sequence comprises a plurality of data structures, each of the data structures being associated with a respective one of the corresponding commands ([0253]).

Regarding claim 4, Lamkin et al. also disclose the associated data comprises at least a command to influence the operation of at least one of the navigation engine and the presentation engine ([0253]; [0254]).

Regarding claim 5, Lamkin et al. also disclose the corresponding commands comprise associated values used to produce the first value ([0402]; [0403]).

Regarding claim 6, Lamkin et al. also disclose the corresponding commands comprise respective navigation commands associated with data representing a further video sequence ([0253]; [0254]; [0402]; [0403]).

Regarding claim 7, Lamkin et al. also disclose the navigation commands are executable to retrieve the data representing the further video sequence and to cause the presentation engine to derive the further video sequence from the data representing the further video sequence ([0253]; [0254]; [0402]; [0403]; [0101]; [0106]; [0107]).

Regarding claim 18, Lamkin et al. disclose a storage medium ([0008]; [0009]) comprising data representing a video sequence ([0106]; [0253]); and a number of associated data each having a corresponding command ([0253]); and data to derive a

first value from one of the corresponding commands in response to an event ([0253]; [0254]; [0402]; [0403]).

Claim 19 is rejected for the same reason as discussed in claim 2 above.

Claim 21 is rejected for the same reason as discussed in claim 4 above.

Claim 22 is rejected for the same reason as discussed in claim 6 above.

Claim 23 is rejected for the same reason as discussed in claim 7 above.

Regarding claim 33, Lamkin et al. also disclose the medium is a DVD ([0089]).

Claims 1-2, 4-19, and 21-35 are rejected under 35 U.S.C. 102(e) as being anticipated by Collar et al. (US 2005/0008348).

Regarding claim 1, Collar et al. disclose a data processing system ([0003]), comprising: a reader that is configured to read data representing a video sequence and a number of associated data each having a corresponding command (Fig. 2; Figs. 9; Figs. 14); a presentation engine for outputting the video sequence derived from the data representing the video sequence ([0038]; "Audio/Video Presentation 32" in Fig. 1, Fig. 4, Fig. 7); a navigation engine, responsive to an event, to invoke one of the corresponding commands according to the output of the video sequence([0051]); and means to derive a first value from the invoked command of the corresponding commands ([0043]; [0046]; [0048]).

Regarding claim 2, Collar et al. also disclose the data representing the video sequence comprises a plurality of data structures, each of the data structures being associated with a respective one of the corresponding commands ([0052]).

Regarding claim 4, Collar et al. also disclose the associated data comprises at least a command to influence the operation of at least one of the navigation engine and the presentation engine ([0051]).

Regarding claim 5, Collar et al. also disclose the corresponding commands comprise associated values used to produce the first value ([0046]).

Regarding claim 6, Collar et al. also disclose the corresponding commands comprise respective navigation commands associated with data representing a further video sequence ([0051]).

Regarding claim 7, Collar et al. also disclose the navigation commands are executable to retrieve the data representing the further video sequence and to cause the presentation engine to derive the further video sequence from the data representing the further video sequence ([0051]).

Regarding claim 8, Collar et al. also disclose a register arranged to store a time varying value during the output of the video sequence by the presentation engine ([0058]).

Regarding claim 9, Collar et al. also disclose the register is a GPRM register set to counter mode ([0058]).

Regarding claim 10, Collar et al. also disclose a means to derive a first value comprises a combiner that is configured to combine the time varying value of the register with data associated with the invoked command ([0064]).

Regarding claim 11, Collar et al. also disclose the combiner comprises an adder that is configured to add the time varying value of the register to the data associated with the invoked command ([0064]).

Regarding claim 12, Collar et al. also disclose the means to derive the first value further comprises means to derive the first value from an initialization value ([0046]).

Regarding claim 13, Collar et al. also disclose the initialization value is generated by a random number generator ([0009]).

Regarding claim 14, Collar et al. also disclose means to generate a sequence of values from the first value ([0048]).

Regarding claim 15, Collar et al. also disclose the means to generate the sequence comprises means to generate the sequence with a predeterminable number of non-repeating values ([0048]).

Regarding claim 16, Collar et al. also disclose the means to generate the sequence comprises a calculator that is configured to perform an iterative operation to calculate the values of the sequence ([0048]).

Regarding claim 17, Collar et al. also disclose iterative operation calculates $r_{i+1} = (ar_i + b) \bmod c$, where a and b are constants, r_1 is the first value and c is a prime ([0048], a=1, b = -1, and c = 5, $r_1 = N_i = S = 6$ in [0054]).

Regarding claim 18, Collar et al. disclose a storage medium ([0008]; [0009]) comprising data representing a video sequence (Fig. 5) and a number of associated data each having a corresponding command (Figs. 9); and data to derive a first value from one of the corresponding commands in response to an event ([0046]-[0048]).

Claim 19 is rejected for the same reason as discussed in claim 2 above.

Claim 21 is rejected for the same reason as discussed in claim 4 above.

Claim 22 is rejected for the same reason as discussed in claim 6 above.

Claim 23 is rejected for the same reason as discussed in claim 7 above.

Claim 24 is rejected for the same reason as discussed in claim 8 above.

Claim 25 is rejected for the same reason as discussed in claim 9 above.

Regarding claim 26, Collar et al. also disclose data to derive a first value, in response to an event, from one of the corresponding commands ([0046]-[0048]).

Claim 27 is rejected for the same reason as discussed in claim 12 above.

Claim 28 is rejected for the same reason as discussed in claim 13 above.

Claim 29 is rejected for the same reason as discussed in claim 14 above.

Claim 30 is rejected for the same reason as discussed in claim 15 above.

Claim 31 is rejected for the same reason as discussed in claim 16 above.

Claim 32 is rejected for the same reason as discussed in claim 17 above.

Regarding claim 33, Collar et al. also disclose the medium is a DVD ([0046]).

Regarding 34, Collar et al. disclose a data processing system ([0003]) comprising: means to play an interruptible or skipable video sequence ([0043]; [0044]; Fig. 5); and a random number generator configured to generate a random number associated with an interruption of the interruptible or skipable video sequence ([0046]-[0048]; [0043]).

Claim 35 is rejected for the same reason as discussed in claim 34 above.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 3 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lamkin et al. (US 2004/0220791) as applied to claims 1-2, 4-7, 18-19, 21-23, and 33 above, and further in view of Kitamura et al. (US Patent 5,703,997).

Regarding claim 3, see the teachings of Lamkin et al. as discussed in claims 1 and 2 above. However, Lamkin et al. do not disclose the plurality of data structures comprises a plurality of Group-of-Pictures structures.

Kitamura et al. disclose the plurality of data structures comprises a plurality of Group-of-Pictures structures (Fig. 8; Fig. 15; column 4, lines 45-46).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the plurality of Group-of-Pictures structures disclosed by Kitamura et al. into the data processing disclosed by Lamkin et al. in order to make the video stream compatible with existing standards, e.g. MPEG standard, in which the structures of Group-of-Pictures are employed.

Claim 20 is rejected for the same reason as discussed in claim 3 above.

Claims 3 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Collar et al. (US 2005/0008348) as applied to claims 1-2, 4-19, and 21-35 above, and further in view of Kitamura et al. (US Patent 5,703,997).

Regarding claim 3, see the teachings of Collar et al. as discussed in claims 1 and 2 above. However, Collar et al. do not disclose the plurality of data structures comprises a plurality of Group-of-Pictures structures.

Kitamura et al. disclose the plurality of data structures comprises a plurality of Group-of-Pictures structures (Fig. 8; Fig. 15; column 4, lines 45-46).

One of ordinary skill in the art at the time the invention was made would have been motivated to incorporate the plurality of Group-of-Pictures structures disclosed by Kitamura et al. into the data processing disclosed by Collar et al. in order to make the video stream compatible with existing standards, e.g. MPEG standard, in which the structures of Group-of-Pictures are employed.

Claim 20 is rejected for the same reason as discussed in claim 3 above.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG Q. DANG whose telephone number is (571)270-1116. The examiner can normally be reached on M-Th:7:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thai Tran can be reached on 571-272-7382. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Hung Q Dang/
Examiner, Art Unit 2621

/Thai Tran/
Supervisory Patent Examiner, Art Unit 2621